

DOCKETED

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Project Title:	01-AFC-7C Russell City Energy Company
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Description:	N/A
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CALIFORNIA ENERGY COMMISSION

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Ms. Barbara McBride
Director of Environmental Services
Calpine Corporation – Russell City Energy Center
3862 Depot Road
Hayward, CA 94545

June 11, 2018

Re: Amendment to Russell City Energy Center's License (01-AFC-07C), Staff's Data Requests, Set 1, A1 through A15

Dear Ms. McBride,

Pursuant to Title 20, California Code of Regulations, section 1716, the California Energy Commission staff requests the information specified in the enclosed data requests. The information requested is necessary to: 1) more fully understand the project, 2) assess whether the facility will be constructed and operated in compliance with applicable regulations, 3) assess whether the project will result in significant environmental impacts, and 4) assess potential mitigation measures.

These data requests, numbered A1 through A15, are being made in the technical areas of Air Quality, Cultural Resources, Geological and Paleontological Resources, Traffic and Transportation, and Visual Resources. Written responses to the enclosed data requests are due to the Energy Commission staff on or before July 11, 2018.

If you are unable to provide the information requested, need additional time, or object to providing the requested information, please send a written notice to the Committee and to me within 20 days of receipt of this notice. The notification must contain the reasons for the inability to provide the information or the grounds for any objections (see Title 20, California Code of Regulations, section 1716 (f)).

If you have any questions regarding the enclosed data requests, please call me at (916) 653-8236 or email me at John.Heiser@energy.ca.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read "John Heiser".

John Heiser
Siting Project Manager

Enclosure (Data Request Packet)
cc: Docket (01-AFC-07C)
POS List

**AMENDMENT TO RUSSELL CITY ENERGY CENTER'S
LICENSE
(01-AFC-07C)**

Energy Commission Staff's Data Requests Set 1, A1-A15

June 11, 2018

Technical Area: Air Quality
Author: Tao Jiang

Permit Modification

Background:

The proposed modification would make a physical change to the project by installing a black start system, including a Battery Energy Storage System (BESS) and controls, which may affect the current facility operation modes and schedules, as well as associated combustion turbine emissions.

Data Request:

- A1. Please provide proposed edits and modifications to the current conditions of certification necessary for the licensing, construction, commissioning, operation, testing, and maintenance of the black start system and associated components.

Air Quality Application to the Air District

Background:

As the petition states on page 3-1, the proposed modification would require review by the Bay Area Air Quality Management District (District) and that such discussions are under way. Staff needs copies of all correspondence between the petitioner and the District in a timely manner in order to stay up to date on any issues that arise prior to completion of the staff's analysis of this petition.

Data Request:

- A2. Please provide copies of all substantive District correspondence regarding the application to the District, including application supplements and e-mails, within one week of submittal or receipt. This request is in effect until the final Commission Decision has been docketed.

Emissions and Impacts During Black Start System Commissioning and Testing

Background

Staff expects that the California Independent System Operator (ISO) is likely to require commissioning and annual testing for availability and responsiveness of the black start designated combustion turbine(s), battery energy storage system and associated electrical, data control, and continuous emissions monitoring systems. The commissioning and testing would include ramping of the black start designated combustion turbine(s) from a very low combustion turbine output load level to normal operating ranges to restore grid electrical power in the event of an emergency. Based upon the draft California ISO tariff (<http://www.caiso.com/Documents/BlackStart-SystemRestorationPhase2SecondRevisedDraftTariffLanguage-CommentsMatrixPosted.html>) dated July 14, 2017, CAISO could require performance testing at any time (Section 5.3 [b]). The petition states on page 3-1 that a blackout situation is very unlikely and states on page 3-4 that any potential air quality impacts would only occur as a result of emergency operations. However, the application does not address the need for, or the impacts of; readiness testing that staff expects is likely to be required by California ISO as part of their final tariff.

Data Requests:

Please confirm whether or not any commissioning or annual readiness testing would be required by California ISO.

- A3. Please provide the estimated schedule of commissioning and black start readiness testing of the black start system if required by California ISO.
- A4. Please describe commissioning activities and a typical readiness test for the black start system.
- A5. Please estimate facility emissions during the commissioning and annual readiness testing of the black start system, and provide any calculation spreadsheets with the embedded calculations live and intact.
- A6. Please provide exhaust stack parameters (including temperature, air pollutant emissions, and vertical velocity) over the black start combustion turbine operating range during commissioning, or readiness testing.
- A7. Please provide facility air quality modeling during the commissioning and annual readiness testing of the black start system. Compare ground level incremental impacts for minimum combustion turbine load and normal operation combustion turbine loads.

Technical Area: Cultural Resources
Author: Melissa Mourkas

BACKGROUND

The petition to amend (PTA) proposes to add black start capability to the current facility's gas turbine units in the form of a battery energy storage system (BESS). The installation would occur in one of two alternative locations on the project site. The PTA describes the concrete pad required for the BESS as approximately 9 feet by 41 feet (369 square feet) and requiring excavation of up to 6 feet below grade at either location.

Data Requests:

- A8. Please describe any new piping or conduit that would involve ground disturbing activities such as trenching, boring or excavation for footings or other structures. Include a description of the size of the ground disturbance and the depth of excavation required.
- A9. Please note and label on the site plan (Figure 1) the areas where additional ground-disturbance beyond the concrete pad is proposed (see # 1 above).
- A10. Please note on the site plan (Figure 1) the location of the proposed laydown and parking area(s) and describe the surface conditions and whether any ground disturbing activities would occur at the location(s).

Technical Area: Geology/Paleontology
Author: Garry Maurath, PhD., PG

Background: **Geology and Paleontology**

The PTA states:

- Section 3.1.10 (Soil and Water Resources) ... "excavated soil will be disposed of in accordance with existing soils management plan and final grading will comply with the existing Erosion and Sedimentation Control Plan"

Although the project owner states there will be grading and excavation neither the design drawings (Figures 2 and 3) nor the project description included with the PTA provide details addressing the depths or lateral extent of soil excavation or foundation treatment (if necessary). Also, there is no data provided on the depth or lateral extent of excavations for connecting utilities.

Excavations have the potential to present hazards or encounter paleontological resources depending on soil types and proposed construction. Staff needs additional information on the proposed project layout, depth, and area of excavations so potential geologic hazards and impacts to paleontologic resources can be analyzed.

Data Requests:

- A11. Please provide information on the depth and lateral extent of ground disturbance associated with construction of the foundation for both of the proposed BESS systems.
- A12. Please provide a plan showing the footprint of the proposed area of excavation and cross-section of excavations that will be required for foundation construction.

Technical Area: Traffic and Transportation
Author: Andrea Koch

Background: Construction Trucks

In the Petition, there is no information on number of delivery and heavy haul trucks.

Data Request:

A13. Please provide the average and peak number of truck trips during construction.

Technical Area: Visual Resources
Author: Andrea Koch

Background: **Structure Heights**

In the Petition, there is no information on the heights of project structures.

Data Request

A14. Please provide the heights of the batteries, inverters, collector switchgears, and transformers.

Technical Area: Project Description
Author: John Heiser

Background:

In the Petition, two areas are identified as the potential location of the BESS. Please identify which site will be used.

A15. Please indicate how these batteries will be kept in either a raking system or enclosure. Please provide drawings of the BESS indicating dimensions and call outs.